What is claimed is:

1. An information-recording method for recording information on an information-recording medium by radiating a light beam power-modulated to be at a recording power level and an erasing power level, the information-recording method comprising:

overwriting a random pattern on the information-recording medium with light beams having a predetermined recording power and a variety of erasing powers;

reproducing the overwritten random pattern to determine a minimum value Pb1 and a maximum value Pb2 of the erasing power obtained when the pattern, in which a reproduction jitter or a reproduction error exceeds a predetermined threshold value, is erased;

determining an optimum erasing power Pb for performing the recording from the determined minimum value Pb1, the determined maximum value Pb2, and a relational expression represented by $Pb = \alpha \times Pb1 + (1 - \alpha) \times Pb2$; and

recording the information with the determined optimum erasing power Pb.

2. The information-recording method according to claim 1, further comprising determining an optimum recording power Pp by using the determined optimum erasing power Pb.

3. The information-recording method according to claim 1, wherein α differs within a range of $\alpha \leq 0.50$ depending on a recording speed when the information is recorded at different recording speeds.

4. The information-recording method according to claim 1, wherein a value of α is previously recorded on the information-recording medium, and the value of α is read from the information-recording medium when the information is recorded.

5. The information-recording method according to claim 2, wherein $Pr < Pb1 < Pb$ and $Pb < Pb2 < Pp$ are satisfied provided that a reproducing power is Pr.

6. An information-recording medium for recording and reproducing information thereon, the information-recording medium comprising:

an information-recording portion on which the information is recorded by being irradiated with a light beam having a recording power Pp and an erasing power Pb lower than the recording power Pp and on which the information is reproduced by being irradiated with a light beam having a reproducing power Pr lower than the erasing power Pb; and

a control data portion, wherein:

information for determining an optimum erasing power Pb

from a minimum erasing power Pb1 which satisfies Pr < Pb1 < Pb and a maximum erasing power Pb2 which satisfies Pb < Pb2 < Pp is previously recorded on the control data portion.

7. The information-recording medium according to claim 6, wherein the information for determining the optimum erasing power Pb from Pb1 and Pb2 is recorded together with information which relates to a recording speed.

8. The information-recording medium according to claim 6, wherein the information for determining the optimum erasing power Pb from Pb1 and Pb2 is α which is represented by an expression of $Pb = \alpha \times Pb1 + (1 - \alpha) \times Pb2$.

9. The information-recording medium according to claim 8, wherein a value of α satisfies $\alpha \leq 0.50$.

10. The information-recording medium according to claim 9, wherein the value of α satisfies $0.25 \leq \alpha \leq 0.50$.

11. The information-recording medium according to claim 6, wherein a linear velocity, which is used when the information-recording medium is moved relative to the light beam for recording the information, is not less than 9 m/sec.

12. An information-recording apparatus for recording

information on an information-recording medium by radiating a light beam power-modulated to be at a recording power level and an erasing power level, the information-recording apparatus comprising:

an optical head which radiates the light beam onto the information-recording medium;

a driver which drives the optical head so that the light beam, which is power-modulated to be at the recording power level and the erasing power level, is outputted from the optical head; and

a Pb-calculating control unit which reproduces a random pattern overwritten with light beams having a predetermined recording power and a variety of erasing powers to determine a minimum value Pb1 and a maximum value Pb2 of the erasing power obtained when the pattern with a reproduction jitter or a reproduction error exceeding a predetermined threshold value is erased, which reads a coefficient α which is used in an expression $Pb = \alpha \times Pb1 + (1 - \alpha) \times Pb2$ and has been previously recorded on the information-recording medium, and which determines an optimum erasing power Pb to be used when the recording is performed, from the determined minimum value Pb1, the determined maximum value Pb2, and the read coefficient α.